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PTO/SB/33 (07-05)

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### PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)

5577-175 (RSW9-99-064)

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on December 22, 2005

Signature

Typed or printed name

Rosa Lee Brinson

Application Number

09/396,873

Filed

09/15/1999

First Named Inventor

Bruce Dickson, et al.

Art Unit

2134

Examiner

Christopher J. Brown

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

☐

applicant/inventor.

☐

assignee of record of the entire interest.

See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.  
(Form PTO/SB/96)

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attorney or agent of record.

Registration number 40,142

☐

attorney or agent acting under 37 CFR 1.34.

Registration number if acting under 37 CFR 1.34 \_\_\_\_\_

  
Signature  
Julie H. Richardson

Typed or printed name

919 854 1400

Telephone number

12/22/05

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below\*.

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\*Total of 1 forms are submitted.

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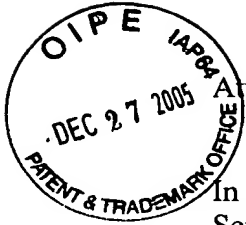


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Attorney's Docket No. 5577-175(RSW9-99-064)

**PATENT**

AF  
IFW

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re: Dickson et al.

Confirmation No.: 8033

Serial No.: 09/396,873

Group Art Unit: 2134

Filed: September 15, 1999

Examiner: Christopher J. Brown

For: PROTECTING SECRET DATA ENTRY FROM INFRARED AND AUDIO  
EAVESDROPPING

Date: December 22, 2005

Mail Stop AF  
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*Rosa Lee Brinson*  
Rosa Lee Brinson

**REASONS FOR PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Sir:

This document is submitted in support of the Pre-Appeal Brief Request For Review filed concurrently with a Notice of Appeal for the above-referenced patent application. No amendments are being filed with this Request. This accompanies a Notice of Appeal.

If any extension of time for the accompanying response or submission is required, Applicant requests that this be considered a petition therefor. The Commissioner is hereby authorized to charge any additional fee, which may be required, or credit any refund, to Deposit Account No. 09-0461.

**REMARKS**

Claims 2-13, 15-24, 26-32, 34-39 are pending. Claim 38 is allowed. Applicant requests review of finally rejected Claims 2-13, 15-24, 26-32, 34-37, and 39. The statements in support of this request note the clear error in facts and/or the lack of elements needed for a *prima facie* rejection of the finally rejected pending claims. Briefly stated, there are three claimed embodiments of masking data entry from eavesdropping: one is directed to thermal or heat masking, one to sound masking, and the third to using both sound and thermal masking (Claim 21).

Under 35 U.S.C. § 102, "a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." M.P.E.P. § 2131 (quoting *Verdegaal Bros. v. Union Oil Co.*, 814

F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987)). "The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present' in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.'" M.P.E.P. § 2112 (citations omitted) (emphasis added). A finding of anticipation further requires that there must be no difference between the claimed invention and the disclosure of the cited reference as viewed by one of ordinary skill in the art. *See Scripps Clinic & Research Foundation v. Genentech Inc.*, 18 U.S.P.Q.2d 1001 (Fed. Cir. 1991).

### **I. Heat Masking**

The Final Action mailed November 2, 2005 (the Action) alleges that U.S. Patent No. 5,828,034 to Chang (Chang) anticipates the data entry heat masking claims (*i.e.*, independent Claims 2 and 23) because Chang proposes a heated keyboard (for cold environments). The Action admits that the heating element in the instant application is used for a different purpose than the heating element of Chang. The Action goes on to state at p. 2, line 5, "the applicant does not claim eavesdropping or a feedback control based on detectability of thermal imprints" (*emphasis added*). Notably, however, Claims 2 and 23 do indeed recite the eavesdropping feature.

Claim 2 recites: **A method for protecting data entry to a data entry device from eavesdropping**, wherein a signature of data entry comprises a temperature differential in the data entry device from data entry by the user, comprising:  
masking the signature of data entry resulting from entry of data by a user of the data entry device so as to reduce the detectability of the signature through eavesdropping by controlling the external temperature of the data entry device to reduce temperature differentials left in the data entry device by the user.

Claim 23 recites: **A system for protecting data entry** to a data entry device from eavesdropping comprising:  
a data entry device, and  
**means for establishing the external temperature of the data entry device to reduce temperature differentials left in the data entry device by the user so as to mask** signature of entry resulting from entry of data by a

user of the data entry device to reduce the detectability of a **thermal signature** by eavesdropping.

Applicant acknowledges that Chang warms the keyboard to keep a user's hand and fingers warm and comfortable, but the heat is for use "in cold environments" (Chang, Abstract). Similar to heated car seats and steering columns (and as expressly stated by Chang), Applicant submits that the heat feature of Chang is used when the external temperatures are cold. Applicant submits that most users find ambient temperature keyboards in conventional use environments to be comfortable.

Further, the heated keyboards proposed by Chang allows the user to set the temperature based on "comfort" (col. 6, lines 5-14). Allowing user control based on personal comfort provides further uncertainty in the ability to thermally mask data entry. With respect to monitoring external temperature of the device to provide the thermal masking, the Action states that Chang proposes an internal sensor (citing Col. 6, lines 18-22) and concludes that external sensing is the same as internal sensing. However, the internal sensor of Chang is used to maintain a user-set temperature for comfort, not thermal masking of a thermal signature associated with keypad entry. Monitoring for temperature to reduce temperature differentials in different keypads is different than monitoring for maintaining a comfort temperature.

Applicant submits that controlling the temperature of the heating element to a user-defined "comfort" temperature would not inherently mask a signature of data entry, particularly when such use is typically in a cold environment. Accordingly, Applicants submit that independent Claims 2 and 23 are not anticipated by or obvious in view of Chang for at least these reasons.

#### **I. A. Chang fails to teach or suggest the temperature range of Claim 8**

The Action improperly states that Chang proposes a range of temperatures from room temperature to 120° F and cites col. 3, line 46 of Chang to support the allegation. However, a closer look at this passage shows that Chang merely states that a designer should use internal signal processing circuitry components that can withstand variations in temperatures ranging to 120° F. The internal temperature of the circuit components does not equate to the temperature of keys at the keypad. There is no teaching of using the temperatures recited in Claim 8 for data entry keypad temperatures, much less for thermal masking. Applicant was unable to find

any support for the allegation that Chang proposes a "range of temperatures from room temperature to 120° F". Indeed, Chang is directed for use in cold environments (Abstract) where "room temperature" would be cold. Chang does not teach or suggest the recited temperatures, and absent the teachings of the instant invention a data entry device would not use "a middle range closer to body temperature than room temperature" as alleged by p. 4 of the Action.

**I. B. Claim 23 is not anticipated by U.S. Patent No. 5,075,606 to Lipman**

The DC fan motor of Lipman fails to teach thermal masking or a heated keyboard. Claim 23 is improperly grouped with the rejections of "sound" masking, but Lipman does not anticipate Claim 23 as it does not teach a data entry device, much less heating a data entry device (neither is Claim 23 obvious based on the "sound" references at page 6 of the Action).

**II. Sound Masking**

**II. A. Claim 21 is not anticipated by the DC fan motor of Lipman.**

Claim 21 recites that, in addition to generating a masking sound, "the blower blows a stream of temperature-controlled air in proximity to the data entry device controlling the external temperature of the data entry device to reduce temperature differentials left in the data entry device by the user." The DC fan motor of Lipman does not teach data entry masking in a data entry device merely because it can blow air.

**II. B. Claims 15 and 34 are not anticipated by Lipman**

The DC fan motor of Lipman does not anticipate Claims 15 or 34 as it fails to teach at least the features noted below.

Claim 15 recites, in part:

masking the signature of data entry resulting from entry of data by a user of the data entry device so as to reduce the detectability of the signature through eavesdropping by generating an interfering sound pattern so as to reduce the detectability of the sound waves.

Claim 34 recites, in part:

a data entry device, and  
means for generating an interfering sound pattern so as to reduce the detectability of sound waves emitted from the data entry device so as to mask a signature of data entry resulting from entry of data by a user of the data entry device to reduce the detectability of an audio signature by eavesdropping.

**II. C. Claims 15 and 34 are not obvious based on US 4,052,720 (McGregor)<sup>1</sup>**

The Action concedes at page 7 that McGregor, which uses room speakers to generate random noise, does not teach a computer in an office, but opines that computers are well known and that it would have been obvious to modify the (global) masking system of McGregor to an office with computers (citing Clausen) to "maximize productivity and ergonomic value." However, even modified, the cited references would not render a system for masking data entry of a computer or data entry device. If the random noise from room speakers from McGregor were sufficiently loud to mask data entry from computers in an office, the noise would not be "ergonomic" and would likely not "maximize productivity." There is no motivation to modify the references in the manner alleged by the Action absent the teachings of the instant invention.


**II. D. There is no motivation to combine Chang and U.S. Patent No. 6,232, 994 to Wiklof to render Claim 22 obvious**

Chang proposes warming a keypad for a cold environment. Wiklof is directed to noise cancellation for a noisy thermal printer using a microphone for receiving sound signals therefrom and an inversion circuit to cancel noise. There is no motivation to combine the noisy thermal printer noise cancellation systems onto a data entry device absent the teachings of the instant invention, because, unlike the printer, the data entry device is not noisy.

Accordingly, Applicants submit that the present application is not in condition for appeal because of a clear error in facts and/or lack of elements needed for one or more *prima facie* rejections as noted above, and requests that prosecution be reopened or that the application be passed to issuance.

USPTO Customer No. 46589  
Myers Bigel Sibley & Sajovec  
Post Office Box 37428  
Raleigh, North Carolina 27627  
Telephone: (919) 854-1400  
Facsimile: (919) 854-1401

Respectfully submitted,

  
Julie H. Richardson  
Registration No. 40,142

<sup>1</sup> The Action rejects Claims 15, 17, 23, 34, 36 and 37 as being obvious over U.S. Patent No. 4,052,720 to McGregor in view of U.S. Patent No. 5,611,608 to Clausen.